

CLAIMS

1. A noise filter (21) in an electric device for reducing noises (12, 13) from a predetermined noise generating source (9), said electric device comprising a first unit (3) to which power is supplied from an original power source (2) and has said predetermined noise generating source (9), and a second unit (4) to which said power is supplied through a branch in said first unit, wherein

power source lines (5a, 5b) for supplying said power from said original power source to said predetermined noise generating source (9) and 10 inter-unit lines (6a, 6b, 7) for supplying said power from said branch to said second unit are wound around the same magnetic body.

2. The noise filter according to claim 1, wherein
the number of turns of said power source lines and that of said 15 inter-unit lines are set to be different from each other.

3. The noise filter according to claim 2, wherein
the ratio of the number of turns of said inter-unit lines to the number 20 of turns of said power source lines is set on the basis of the ratio of an impedance of said inter-unit lines to an impedance of said power source lines.

4. The noise filter according to claim 2, wherein
the ratio of the number of turns of said inter-unit lines to the number 25 of turns of said power source lines is set to be almost equal to the ratio of an

impedance of said inter-unit lines to an impedance of said power source lines.

5 5. The noise filter according to claim 3, wherein
said inter-unit lines are constructed of a plurality of lines,
a total impedance of the plurality of lines is regarded as an
impedance of said inter-unit lines, and
a bundle of electric lines obtained by bundling said plurality of lines
is wound as said inter-unit lines.

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6. The noise filter according to claim 2, wherein
said inter-unit lines are constructed of a plurality of lines, and
the ratio of the number of turns of said power source lines and the
number of turns of said plurality of lines of said inter-unit lines is set on the
15 basis of the ratio of respective impedances.

7. The noise filter according to claim 6, wherein
the ratio between the number of turns of said power source lines and
the number of turns of said plurality of lines of said inter-unit lines is set
20 almost proportional to the ratio of said impedances.

8. An outdoor unit to which power is supplied from an original
power source (2), comprising a predetermined noise generating source (9)
and a noise filter (21) for reducing noises (12, 13) from said predetermined
25 noise generating source, wherein

the outdoor unit is provided for an air conditioner, together with an indoor unit (4) to which said power is supplied through a branch in said outdoor unit, and

in said noise filter, power source lines (5a, 5b) for supplying said power from said original power source to said predetermined noise generating source (9) and inter-unit lines (6a, 6b, 7) for supplying said power from said branch to said second unit are wound around the same magnetic body.

10 9. The outdoor unit according to claim 8, wherein
said noise generating source is an inverter.

10. An air conditioner comprising:

an outdoor unit (3) to which power is supplied from an original power source (2), having a predetermined noise generating source (9) and a noise filter (21) for reducing noises (12, 13) from said predetermined noise generating source; and

an indoor unit (4) to which said power is supplied through a branch in said outdoor unit, wherein

20 in said noise filter, power source lines (5a, 5b) for supplying said power from said original power source to said predetermined noise generating source (9) and inter-unit lines (6a, 6b, 7) for supplying said power from said branch to said second unit are wound around the same magnetic body.